IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1-2.   (Canceled)

3.   (Currently Amended) The encoding apparatus according to claim 14 wherein said controller verifies whether or not the ~~suffing~~ stuffing bytes will be encoded depending on the amount of data generated in encoding respective pictures.

4.   (Currently Amended) The encoding apparatus according to claim 14 wherein said controller manages control of encoding the stuffing bytes so that no overflow will be produced in ~~the~~ a VBV buffer.

5.   (Canceled)

6.   (Currently Amended) The encoding apparatus according to claim 15 wherein said controller generates additional information indicating whether or not the encoding mode is such encoding mode in which the amount of said picture coding data is substantially proportionate to the ~~lapse of~~ elapsed time.

7-12.   (Canceled)

13.   (Currently Amended) An encoding apparatus for encoding picture data, comprising:

an encoder for encoding said picture data at a variable rate;

a multiplexer for multiplexing input video and audio streams;

a source packetizer for encoding an input multiplexed stream into an AV stream composed of source packets in accordance with an application format of a recording medium on which to record the AV stream; and

a controller having an encoding mode in which the volume of encoded data is substantially proportionate to the an elapsed time and another encoding mode in which it is not guaranteed that the volume of encoded picture data is proportionate to the elapsed time, said controller controlling the volume of encoded picture data depending on the pertinent encoding mode,

said controller setting a multiplexing bitrate of a transport stream and an average bitrate of video encoding, controlling the encoder so that a video stream is encoded at a variable bitrate such that a preset average bitrate is guaranteed from one preset time domain to another, controlling the multiplexer so as not to produce a null-packet in case there is no elementary stream to be rendered into a transport packet and appending an arrival stamp to each transport packet to form a source packet by controlling the source packetizer.

14.   (Previously Presented) The encoding apparatus according to claim 13 wherein said controller manages control so that stuffing bytes will be encoded if the amount of said picture coding data generated per unit time is less than a preset value.

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15.　(Currently Amended)　The encoding apparatus according to claim 13 wherein said controller manages control to perform encoding in an encoding mode in which the amount of said picture coding data generated is substantially proportionate to the ~~lapse of~~ elapsed time within a preset error range.

16.　(Currently Amended)　An encoding method for encoding picture data, comprising:

an encoding step of encoding said picture data at a variable rate;

a multiplexing step of multiplexing input video and audio streams;

a packetizing step of encoding an input multiplexed stream into an AV stream composed of source packets in accordance with an application format of a recording medium on which to record the AV stream; and

a controlling step having an encoding mode in which the volume of encoded data is substantially proportionate to the an elapsed time and another encoding mode in which it is not guaranteed that the volume of encoded picture data is proportionate to the elapsed time, said controlling step controlling the volume of encoded picture data depending on the pertinent encoding mode;

said controlling step setting a multiplexing bitrate of a transport stream and an average bitrate of video encoding, controlling an encoder so that a video stream is encoded at a variable bitrate such that a preset average bitrate is guaranteed from one preset time domain to another, controlling a multiplexer so as not to produce a null-packet in case there is no elementary stream to be rendered into a transport packet and appending an arrival stamp to each transport packet to form a source packet by controlling a source packetizer.

17.   (Currently Amended) A recording medium having recorded thereon a
computer-readable program used for controlling an encoding apparatus encoding picture data;
said program comprising:

an encoding step of encoding said picture data at a variable rate;

a multiplexing step of multiplexing input video and audio streams;

a packetizing step of encoding an input multiplexed stream into an AV stream
composed of source packets in accordance with an application format of a recording medium on
which to record the AV stream; and

a controlling step having an encoding mode in which the volume of encoded data
is substantially proportionate to the an elapsed time and another encoding mode in which it is not
guaranteed that the volume of encoded picture data is proportionate to the elapsed time, said
controlling step controlling the volume of encoded picture data depending on the pertinent
encoding mode;

said controlling step setting a multiplexing bitrate of a transport stream and an
average bitrate of video encoding, controlling an encoder so that a video stream is encoded at a
variable bitrate such that a preset average bitrate is guaranteed from one preset time domain to
another, controlling a multiplexer so as not to produce a null-packet in case there is no
elementary stream to be rendered into a transport packet and appending an arrival stamp to each
transport packet to form a source packet by controlling a source packetizer.

18.   (Currently Amended) A program for causing a computer controlling an
encoding apparatus encoding picture data to execute

an encoding step of encoding said picture data at a variable rate;

a multiplexing step of multiplexing input video and audio streams;

a packetizing step of encoding an input multiplexed stream into an AV stream composed of source packets in accordance with an application format of a recording medium on which to record the AV stream; and

a controlling step having an encoding mode in which the volume of encoded data is substantially proportionate to the an elapsed time and another encoding mode in which it is not guaranteed that the volume of encoded picture data is proportionate to the elapsed time, said controlling step controlling the volume of encoded picture data depending on the pertinent encoding mode;

said controlling step setting a multiplexing bitrate of a transport stream and an average bitrate of video encoding, controlling an encoder so that a video stream is encoded at a variable bitrate such that a preset average bitrate is guaranteed from one preset time domain to another, controlling a multiplexer so as not to produce a null-packet in case there is no elementary stream to be rendered into a transport packet and appending an arrival stamp to each transport packet to form a source packet by controlling a source packetizer.

19.   (Currently Amended) A recording medium having picture data recorded thereon, said recording medium having recorded thereon an AV stream file including said picture data and audio data associated with said picture data; and

a flag indicating whether or not encoding has been made in an encoding mode in which the file size of said AV stream is substantially proportionate to the lapse of an elapsed time;

wherein said AV stream is encoded at a variable bitrate such that a preset average

bitrate is guaranteed from one preset time domain to another.

20.   (Previously Presented) The recording medium according to claim 19

wherein said flag is time_controlled_flag.